

Applic. No. 10/823,226  
Amdt. dated April 28, 2005  
Reply to Office action of December 28, 2004

Remarks/Arguments:

Reconsideration of the application is requested.

Claims 1-22 remain in the application. Claims 1 and 13 have been amended.

In item 1 on page 2 of the above-identified Office action, claims 1-4 have been rejected as being fully anticipated by Davis (U.S. Patent No. 4,911,839) under 35 U.S.C. § 102.

As will be explained below, it is believed that the claims were patentable over the cited art in their original form and the claims have, therefore, not been amended to overcome the references.

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful.

Claim 1 calls for, *inter alia*:

at least one planar region disposed spaced apart from the membrane margin and having a surface larger than the given surface of one of the supporting elements and positioned

disposed opposite to a sludge inflow in a final mounting state of the membrane plate.

The Davis reference discloses a circular area (14f) of the membrane that covers the flat top of the stay boss (17). The circular area is supported by the stay boss (17).

The reference does not show at least one planar region disposed spaced apart from the membrane margin and having a surface larger than the given surface of one of the supporting elements and positioned disposed opposite to a sludge inflow in a final mounting state of the membrane plate, as recited in claim 1 of the instant application. The Davis reference discloses a circular area (14f) that covers and is supported by the stay boss. The Davis reference does not disclose a surface larger than the supporting elements that is disposed opposite a sludge inflow in a final mounting state of the membrane. This is contrary to the invention of the instant application as claimed, in which at least one planar region is disposed spaced apart from the membrane margin and has a surface larger than the given surface of one of the supporting elements and is positioned disposed opposite to a sludge inflow in a final mounting state of the membrane plate.

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Since claim 1 is believed to be allowable, dependent claims 3-4 are believed to be allowable as well.

Even though dependent claims 2 and 3 are believed to be allowable, the following remarks pertain to claims 2 and 3.

The Davis reference does not disclose a planar region that is a reinforcement that is a thickening of the membrane material of the planar region. Figure 2 of Davis shows that the circular area 14f of the membrane is not thickened with respect to the remaining areas of the membrane. The membrane is a constant thickness. This is supported by the dashed line in Fig. 2 of Davis, which shows the outer contour of the membrane (14).

In item 6 on page 3 of the Office action, claims 15 and 16 have been rejected as being fully anticipated by Tiger Gil et al. (U.S. Patent No. 5,658,468) (hereinafter "Gil") under 35 U.S.C. § 102.

Claim 15 calls for *inter alia*:

an outlet duct extending in a region of the inflow orifice substantially perpendicularly to a longitudinal direction of the chamber plate.

The Gil reference discloses an inlet pipe (17) with an inlet orifice (19) that is disposed at an angle  $\alpha$  of 10-30 degrees to the normal of the longitudinal axis of the plate (24).

The reference does not show an outlet duct extending in a region of the inflow orifice substantially perpendicularly to a longitudinal direction of the chamber plate, as recited in claim 15 of the instant application. The Gil reference discloses a pipe that is at an angle of 10-30 degrees with respect to the normal of the longitudinal axis of the plate. The Gil reference does not disclose that the pipe is substantially perpendicular to the longitudinal axis of the plate. This is contrary to the invention of the instant application as claimed, in which an outlet duct extends in a region of the inflow orifice substantially perpendicularly to a longitudinal direction of the chamber plate.

Since claim 15 is believed to be allowable over Gil, dependent claim 16 is believed to be allowable over Gil as well.

In item 11 on page 4 of the above-identified Office action, claims 5-8 and 11 have been rejected as being obvious over Davis (U.S. Patent No. 4,911,839) in view of Ruhland (U.S. Patent No. 5,601,709) under 35 U.S.C. § 103. Ruhland does not

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make up for the deficiencies of Davis. Since claim 1 is believed to be allowable, dependent claims 5-8 and 11 are believed to be allowable as well.

In item 17 on page 5 of the above-identified Office action, claims 9 and 10 have been rejected as being obvious over Davis (U.S. Patent No. 4,911,839) in view of Ruhland (U.S. Patent No. 5,601,709) and Mikkaichi (U.S. Patent No. 6,460,300) under 35 U.S.C. § 103. Mikkaichi does not make up for the deficiencies of Davis and Ruhland. Since claim 1 is believed to be allowable, dependent claims 9 and 10 are believed to be allowable as well.

In item 20 on page 6 of the above-identified Office action, claim 13 has been rejected as being obvious over Davis (U.S. Patent No. 4,911,839) in view of Gil (U.S. Patent No. 5,658,468) under 35 U.S.C. § 103.

The rejection has been noted and the claims have been amended in an effort to even more clearly define the invention of the instant application. The claims are patentable for the reasons set forth below. Support for the changes is found in claim 1 of the instant application.

Claim 13 calls for, *inter alia*:

the at least one planar region positioned disposed opposite to a sludge inflow of the at least one chamber plate in a final mounting state of the membrane carrier plate.

It is a requirement for a *prima facie* case of obviousness, that the prior art references must teach or suggest all the claim limitations.

The references do not show or suggest the at least one planar region positioned disposed opposite to a sludge inflow of the at least one chamber plate in a final mounting state of the membrane carrier plate, as recited in claim 13 of the instant application.

The Davis reference discloses a circular area (14f) that covers and is supported by the stay boss. The Davis reference does not disclose that the circular area (14f) is disposed opposite a sludge inflow in the final mounting state of a membrane carrier plate. This is contrary to the invention of the instant application as claimed, in which the at least one planar region is positioned disposed opposite to a sludge inflow of the at least one chamber plate in a final mounting state of the membrane carrier plate.

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The Gil reference discloses a membrane (14) disposed opposite the orifice (19). The Gil reference does not disclose that the membrane has a planar region as recited in claim 13 of the instant application. This is contrary to the invention of the instant application as claimed, in which the at least one planar region is positioned disposed opposite to a sludge inflow of the at least one chamber plate in a final mounting state of the membrane carrier plate.

The references applied by the Examiner do not teach or suggest all the claim limitations. Therefore, it is believed that the Examiner has not produced a *prima facie* case of obviousness.

In item 22 on page 7 of the above-identified Office action, claim 14 has been rejected as being obvious over Davis (U.S. Patent No. 4,911,839) in view of Stover et al. (U.S. Patent No. 5,198,123) (hereinafter "Stover") under 35 U.S.C. § 103. Since claim 13 is believed to be allowable, dependent claim 14 is believed to be allowable as well. It is also noted that since claim 14 is dependent upon claim 13 it is assumed that claim 14 should not be rejected without the Gil reference. Therefore, the rejection of claim 14 over Davis in view of Stover is not consistent with the rejection of claim 13.

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In item 24 on page 7 of the Office action, claim 17 has been rejected as being obvious over Gil (U.S. Patent No.5,658,468) in view of Gwilliam (U.S. Patent No.3,276,594) under 35 U.S.C. § 103. Gwilliam does not make up for the deficiencies of Gil. Since claim 15 is believed to be allowable, dependent claim 17 is believed to be allowable as well.

In item 26 on page 8 of the Office action, claim 18 has been rejected as being obvious over Gil (U.S. Patent No.5,658,468) in view of Stover (U.S. Patent No.5,198,123) under 35 U.S.C. § 103. Stover does not make up for the deficiencies of Gil. Since claim 15 is believed to be allowable, dependent claim 18 is believed to be allowable as well.

In item 28 on page 8 of the above-identified Office action, claims 19-22 have been rejected as being obvious over Davis (U.S. Patent No. 4,911,839) in view of Gil (U.S. Patent No.5,658,468) under 35 U.S.C. § 103.

Claims 19 and 22 call for, *inter alia*:

a plurality of chamber plates each having a plurality of sludge inflows each with an inflow orifice formed therein and disposed substantially opposite the planar region of the membrane.



It is a requirement for a *prima facie* case of obviousness, that the prior art references must teach or suggest all the claim limitations.

The references do not show or suggest a plurality of chamber plates each having a plurality of sludge inflows each with an inflow orifice formed therein and disposed substantially opposite the planar region of the membrane, as recited in claims 19 and 22 of the instant application.

The Davis reference discloses a circular area (14f) that covers and is supported by the stay boss. The Davis reference does not disclose a chamber plate having sludge inflows with inflow orifices formed therein disposed opposite the circular area (14f). This is contrary to the invention of the instant application as claimed, in which a plurality of chamber plates each have a plurality of sludge inflows each with an inflow orifice formed therein and which are disposed substantially opposite the planar region of the membrane.

The Gil reference discloses a membrane (14) disposed opposite the orifice (19). The Gil reference does not disclose that the membrane has a planar region as recited in claims 19 and 22 of the instant application. Therefore Gil does not show or

suggest a plurality of chamber plates each having a plurality of sludge inflows each with an inflow orifice formed therein and disposed substantially opposite the planar region of the membrane.

The references applied by the Examiner do not teach or suggest all the claim limitations. Therefore, it is believed that the Examiner has not produced a *prima facie* case of obviousness.

A critical step in analyzing the patentability of claims pursuant to 35 U.S.C. § 103 is casting the mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field. See In re Dembiczak, 175 F.3d 994, 999, 50 USPQ2d 1614,1617 (Fed. Cir. 1999). Close adherence to this methodology is especially important in cases where the very ease with which the invention can be understood may prompt one "to fall victim to the insidious effect of a hindsight syndrome wherein that which only the invention taught is used against its teacher." Id. (quoting W.L. Gore & Assocs., Inc. v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 313 (Fed. Cir. 1983)).

Most if not all inventions arise from a combination of old elements. See In re Rouffet, 149 F.3d 1350, 1357, 47 USPQ2d

1453,1457 (Fed. Cir. 1998). Thus, every element of a claimed invention may often be found in the prior art. See id. However, identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention. See id. Rather, to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the appellant. See In re Dance, 160 F.3d 1339, 1343, 48 USPQ2d 163.5, 1637 (Fed. Cir. 1998); In re Gordon, 733 F.2d 900, 902, 221 USPQ 1125,1127 (Fed. Cir. 1984).

The motivation, suggestion or teaching may come explicitly from statements in the prior art, the knowledge of one of ordinary skill in the art, or, in some cases the nature of the problem to be solved. See Dembiczak, 175 F.3d at 999, 50 USPQ2d at 1617. In addition, the teaching, motivation or suggestion may be implicit from the prior art as a whole, rather than expressly stated in the references. See WMS Gaming, Inc. v. International Game Tech., 184 F.3d 1339, 1355, 51 USPQ2d 1385, 1397 (Fed. Cir. 1999). The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those

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of ordinary skill in the art. See In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981) (and cases cited therein). Whether the examiner relies on an express or an implicit showing, the examiner must provide particular findings related thereto. See Dembiczak, 175 F.3d at 999, 50 USPQ2d at 1617. Broad conclusory statements standing alone are not "evidence." Id. When an examiner relies on general knowledge to negate patentability, that knowledge must be articulated and placed on the record. See In re Lee, 277 F-3d 1338, 1342-45, 61 USPQ2d 1430, 1433-35 (Fed. Cir. 2002).

Applicants respectfully believe that any teaching, suggestion, or incentive possibly derived from the prior art is only present with hindsight judgment in view of the instant application. "It is impermissible, however, simply to engage in a hindsight reconstruction of the claimed invention, using the applicant's structure as a template and selecting elements from references to fill the gaps. . . . The references **themselves** must provide some teaching whereby the applicant's combination would have been obvious." In re Gorman, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991) (emphasis added). Here, no such teaching is present in the cited references. Accordingly, upon evaluation of the examiner's comments, it is respectfully believed that the evidence adduced by the examiner is insufficient to establish a prima facie case of obviousness

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with respect to the claims. Accordingly, the examiner is requested to withdraw the rejection.

Since claim 19 is believed to be allowable over Davis in view of Gil, dependent claims 20 and 21 are believed to be allowable over Davis in view of Gil as well.

It is accordingly believed to be clear that none of the references, whether taken alone or in any combination, either show or suggest the features of claims 1, 13, 15, 19, or 22. Claims 1, 13, 15, 19, or 22 are, therefore, believed to be patentable over the art and since all of the dependent claims are ultimately dependent on claims 1, 13, 15, and 19, they are believed to be patentable as well.

In view of the foregoing, reconsideration and allowance of claims 1-22 are solicited.

In the event the Examiner should still find any of the claims to be unpatentable, counsel respectfully requests a telephone call so that, if possible, patentable language can be worked out.

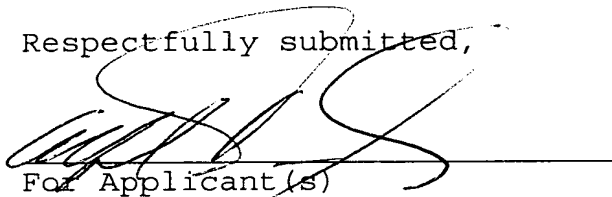
Petition for extension is herewith made. The extension fee for response within a period of one month pursuant to Section

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1.136(a) in the amount of \$120 in accordance with Section 1.17  
is enclosed herewith.

Please charge any other fees which might be due with respect  
to Sections 1.16 and 1.17 to the Deposit Account of Lerner &  
Greenberg P.A., No. 12-1099.

Respectfully submitted,



For Applicant(s)

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AKD:cgm

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